

Scaling up local rural innovations in the Andes: an alternative **to reduce** poverty

What are local rural innovations?

Local rural innovations are effective ways and practices to solve some of the problems that families face in Andean rural locations. Through them, it is also possible to take advantage of the opportunities that arise from changes in the region's economy.

They stem from the creativeness of innovators and entrepreneurs who, along with other players —such as business people, decision makers, development practitioners and scholars, among others—, develop and apply them aiming to change the way they produce, do business and organize their economic, political and social life.

Local rural innovations do not stem exclusively from traditional or indigenous knowledge, but they are not solely the product of scientific research either. They emerge from the meeting, the combination of practical knowledge, ideas and concepts as well as from their application and continuous/daily experimentation along with technology, knowledge and science produced through formal research processes at universities and public and private research centers.



A Coffee producer from APCA, the "Asociación de Productores de Café de Apolo" in Bolivia, showing a package of "Madidi" ecological coffee brand. This product is the result of an innovative entrepreneurial Alliance between APCA and private entrepreneurs.



Diversity of local innovations that may be found in rural locations in the Andes:

- **Technology and practices based on local knowledge combined with scientific technology and knowledge:** Seeds, machinery and forms of production and economic organization that are suited for the existing local resources, fit into the local economy, and meet the demands and challenges of dynamic external markets.
- **Organizational strategies and practices to face food insecurity:** Mechanisms that poor rural communities generate aimed at organizing themselves, reducing risks due to lack of food, ensuring the provision of seeds and forage in case of droughts, floods or frost, and protecting the inhabitants with less resources.
- **Non-agricultural services and businesses based on underused local resources, such as biodiversity, landscape and cultural identity:** Agricultural products, crafts and tourism services that carry cultural elements, traditions and people's knowledge and take advantage of the changes in consumption patterns and of new opportunities arising from the growing connection between rural communities and cities of the same country and other countries.
- **Norms and regulations based on customary law, complementing and enhancing formal law:** Institutional arrangements that enable citizen participation in the decisions of local governments; forms of collective management of natural resources; interpellation mechanisms to address the local and national government, which promote the exercise of citizenship of rural populations.
- **Financial services based on local economic practices:** Rotating collective credit and savings systems, risk-sharing schemes and micro-insurance, using traditional principles and practices combined with new technology and innovations from the formal financial world, which are adapted to the realities of rural communities.
- **Medical equipment and sanitation services adapted to work in rural settings:** Incubators, sterilizers, machines for the treatment of diseases and water purification systems created by local inventors and entrepreneurs, who adapt the latest technology (generated in universities and research centers) to the hard conditions of rural communities.
- **Childhood education support systems based on traditional practices:** Providing meals, lodging and family support to children from remote areas who go to towns and intermediate cities to study. These systems are based on traditional practices of reciprocity but they are supported by State educational programs and policies.
- **Improvements in rural housing using local means and resources:** Bathrooms, cooking and heating stoves and air-conditioning systems that improve the environment of rural homes and are developed from local inventions using simple technology and inexpensive resources.

How can rural local innovations contribute to rural poverty reduction?

Agriculture

Local rural innovations are adapted to the realities of specific contexts. Because of this, they use knowledge as well as existing resources and fit well in the local institutional framework. More importantly, they are embedded in the social and economic practices of communities.

This characteristic makes them particularly effective in increasing the production and the

quality of staple foods in small farming systems with few natural resources available, without the need of substantial changes to current conditions and requiring few new inputs or those hard to obtain for poor populations.

Local innovations can generate direct and almost immediate effects in terms of the availability of food produced and consumed by families; they

also have mid-term effects, such as generating income to have access to more food and reduce vulnerability as well as unforeseen events.

Local innovations are able to insert themselves in small farming systems in a gradual and natural way, without disrupting the system but making meaningful changes and practical improvements.

How can this innovation, which has a positive effect on agriculture, be expanded to larger scales in other places where threshing different types of forage is needed?

Practical solutions in the highlands of Peru:

Chuño (freeze-dried potato) is one of the main staple foods in the Andes. Part of its production process involves peeling the skin of frozen potatoes. Traditionally, this is done by treading on them in freezing water. It is an arduous task normally carried out by women.

In Apurimac, Peru, local innovator Walter Utani devised a machine to peel frozen potatoes that combines traditional techniques with modern food processing technology. On the one hand, this innovation solves a local practical problem; on the other, it takes advantage of technology to generate a higher quality product.



Walter Utani receiving a batch of peeled potatoes from the machine he invented

Rural businesses

Rural areas in Latin America have increasing and better access to public services, infrastructure, roads, etc. This generates new opportunities to develop non-agricultural economic activities that can be harnessed through innovative initiatives, creating links so that different rural businesses may emerge.

They are businesses that emerge from a different vision of the resources found in rural settings and foster a sharper dialog with the urban world. Innovations create the opportunity of accessing other economic sectors and of developing businesses precisely by using assets that are already available in a creative way.

These businesses have **multiplier effects** on farming activities because they frequently add

value to agricultural products in a direct way (by-products) or allow taking advantage of underused or unused resources, such as rural landscape and local culture, among others.

A feature of rural businesses that are linked to farming is that they increase the liquidity of small production systems, enabling rural families to acquire farming inputs and also to provide for their education and health.

The changes produced by innovative rural businesses can also be observed beyond the family and territory levels: the local market of products and services grows along with local institutions and organizations, adjusting to the new configurations of local economy. This also promotes changes in local policies, which adapt to the needs of these businesses.



Rural community tourism: sharing every day activities with rural families:

In addition to site-seeing and adventure activities, many tourists visiting rural areas in Latin America also want to “connect” with rural communities. Rural tourism allows visitors to experience rural family life by staying in their homes and participating in their daily activities. In Peru, Nieves Cutipa has a guesthouse in Sibayo, Arequipa. With 12 other families of the community, she receives tourist groups, the largest number of which comes during July and August.

Nieves works with travel agencies and it is through them that tourists visit her. The success of her tourism ventures would not have been possible without the support of the municipal government, which has promoted the execution of public works embellishing her town and created policies to protect their cultural heritage.

How can new rural tourism initiatives, good practices and new services for tourists be promoted in Andean communities, without distorting their local and family-based essence? How can the proactive attitude of Sibayo’s municipal government be replicated in terms of supporting rural businesses?

Local government

The administrative and political decentralization of government in the region’s countries is being consolidated and improved. Highly innovative and locally effective institutional proposals, policies and government practices have been developed in several rural communities.

While in many cases the traditional knowledge of communities has generated innovations in local institutions, in other cases development project technicians, local authorities, university researchers and even national authorities have promoted interesting ideas out of which innovative processes developed.

The Local Resource Allocation Committee (CLAR, as per its Spanish acronym):

One important trend of thought on rural development proposes that rural people themselves manage donation public resources and decide how to use them. This poses the challenge of making this type of public resource implementation compatible with national regulations.

The Puno-Cuzco Corridor project, funded by IFAD in Peru, has developed a method that enables rural communities to manage public resources (the CLAR mechanism). The method is based on the traditional decision making practices of Andean communities, which are rooted in principles of fairness, co-responsibility and transparency. The CLAR method has revolutionized the way resources are applied for rural development. It has been adopted not only by rural communities, but also by municipal governments. Moreover, this institutional innovation has inspired the development of a number of laws and regulations on public investment, allowing the transfer of public resources to private groups of rural inhabitants.

Supporting the scaling up of rural innovations

Despite the diverse number of local rural innovations and their effectiveness in solving problems or harnessing opportunities, they face many obstacles to go beyond the local scale, improve and expand their use so that more people may benefit from the changes they bring about.

Regardless of how well they perform, local rural innovations will have limited effect on

poverty reduction if they are not scaled up in order to benefit a larger number of poor families.

To succeed in scaling up local innovations, exchanging knowledge and experiences is not enough. Finding and disseminating appropriate technologies and adequate solutions or developing recommendations and good practices with the participation of local players is not enough either. It is necessary to go beyond that.

It is necessary to increase the scale of the entire innovation process, for it is this process that generates innovations over time. At this point, far more complex variables appear compared to those that are dealt with at the local level, the innovation's place of origin.

This entails maneuvering in different institutional scenarios, negotiating with players, overcoming regulatory restrictions, and rising above different market inadequacies. To achieve this, it is necessary to understand that not all innovations share the same nature and, therefore, not all actions and ways of providing support work in every case.

Some innovations, such as improved seed, machinery or handcrafts, are **tangible** and can be promoted by using market forces as the fuel for the scaling up process.

Other innovations, such as local regulations, farming practices and development approaches, are **intangible**. In these cases, market forces cannot be used, as these innovations are not influenced by them.

To promote the scaling up of these innovations, institutional and political incentives need to be used instead.

For that matter, differentiated strategies are needed to successfully scale up different types of rural innovations:

- Innovations that are tangible and sensitive to market incentives can be scaled up by **supporting entrepreneurs and innovators**, and improving the conditions of the context in which they have developed
- Innovations that are intangible and are affected by non market (institutional) incentives can be scaled up by **developing models** and approaches that spur **changes in institutions and organizations**.

Tangible innovations can be scaled up through the development of **ventures**. This involves supporting local players to:

- Create products around an innovation.
- Enhance a product by improving its operation, application, forms of production.
- Develop and expand the market for a product.
- Build the entrepreneurial capacity of innovators.
- Link local innovators to other innovators and to sources of information and technology.
- Finance the initiative through venture capital or concessionary lending.
- Create a favorable environment that provides support to the innovator and to the innovation process.

Intangible innovations can be scaled up through **modeling**. This entails supporting stakeholders in:

- Identifying the “essence of the innovation”: what makes the innovation work and produce changes.
- Making explicit the ways in which the innovation is applied and operated: manuals, good practices, etc.
- Generating evidence on the innovation’s effectiveness and making explicit the circumstances in which it works as well as those in which it does not work.
- Promoting collective action to support the innovation; a “critical mass” of stakeholders in which the innovation scales up and is applied.
- Developing a capacity-building process for the innovation’s application.

Remarks

Rural innovations clearly are positive processes for rural communities in the Andes, particularly for those facing conditions of poverty.

Identifying innovations or analyzing the creativeness of local players and the changes they produce in their lives and communities is not the greatest challenge; the specific challenge is to maximize those innovative processes and increase the scale of their effects.

For that matter, specific and differentiated strategies are needed to scale up.

A detailed description of strategies to scale up tangible and intangible innovations can be found in the research summaries 2 and 3 that complete the series.

This summary is the **first** of a series of three documents that encompass research findings of the Scaling Up Rural Innovations Program, a joint IFAD – IDRC initiative. Contact: alvaro.paz27@gmail.com. More information about the research supported by the Program can be found in www.escalandoinnovacionesrurales.com.

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